

High Density Polyethylene

High ESCR GPBM

Product Description:

HDPE 010DB50 is a natural high density polyethylene grade produced with LyondellBasell's Hostalen Slurry process. This grade exhibits superior ESCR property along with excellent processability and a good balance of Stiffness & Impact strength.

BIS Designation Code for HDPE 010DB50 as per IS 7328:2020 is: **IS 7328-3B-BBQ-EXTA.**

Recommended Applications:

HDPE 010DB50 is recommended for:

- Containers, bottles upto 5L capacity
- Blow moulded Containers for packing of Pesticides, Surfactants & Corrosive Chemicals
- Cable Sheathing & Jacketing Compound

Typical Properties:

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Tested Properties	Test Method	UOM	Values*
Resin Properties			
Melt Flow Index (190°C & 5.0Kg)	ASTM D1238	g/10min	1.3
Density @ 23°C	ASTM D1505	g/cm ³	0.9500
Mechanical Properties			
Tensile Strength @ Yield (Type-IV)	ASTM D638	MPa	25
Elongation @ Break (Type-IV)	ASTM D638	%	>850
Flexural Modulus	ASTM D790	MPa	1050
Notched Izod Impact Strength @ 23°C	ASTM D256	J/m	150
Thermal Properties			
Vicat Softening Point	ASTM D1525	°C	125
Heat Deflection Temperature (@ 0.455MPa)	ASTM D648	°C	70
Environmental Properties			
ESCR (10% Igepal), F ₅₀	ASTM D1693B	Hrs	>600

* Typical values not to be construed as specification limits. Values may change without any prior notice.

* Mechanical Properties tested on Compression Moulded test specimens.

Recommended Processing Temperature: 160 – 190°C

Packaging Information:

This material is packed and available in raffia bags with net content of 25.0 Kg only. The raffia bags used conforms to the minimum strength requirements of BIS, however, customer shall take due care while handling the bag. Prolonged exposure of these bags to sunlight may deteriorate the bag's performance and cause spillage and wastage. IOCL does not warrant loss of material due to poor material handling practices.

Storage & Handling:

Prevent HDPE Material from direct exposure to sunlight & heat to avoid quality deterioration. The storage location should be dry, dust free and the storage temperature should not exceed 50°C. Non-compliance to these precautionary measures can lead to degradation of the product, causing colour changes, odor and inadequate product performance. It is advised to process HDPE material within 06 months of delivery.

Regulatory Information:

HDPE 010DB50 meets the "Specification for Polyethylene for safe use in contact with Foodstuff, Pharmaceuticals and Drinking water" as per IS: 10146-1982. It also conforms to the positive list of constituents as per IS: 16738-2018. The grade and Additives incorporated shall meet with FDA: CFR Title21, 177.1520, Olefin Polymers.

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